

Work Order ID 137434

September 30, 2015 1:32:10 PM

137434

Bush

Page 1

Item ID: D3805-1 Accept *N900040100* Setup Start *NS1*

Revision ID:

Item Name: Plate Stop *NS2*

Start Date: 9/30/2015 Start Qty: 12.00 *12*

Required Date: 10/2/2015 Req'd Qty: 12.00 *12*

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: SH Date: 20150930 Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3805	C								
100		0.00							
100									
Waterjet	Memo	0.04							
FLOW CNC Waterjet	1-Cut as per Dwg D3805								
	Dwg Rev: <u>C</u>								
	Prog Rev: <u>C</u>								
	2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.00							
Quality Control									

(12)

09/15/2015

(12)

09/15/2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY																																																											
☐ Environment	☐ Design	☐ Doc/Data	☐ Equip/Tooling	☐ Handling/Pre	☐ Material	☐ Internal Transport	☐ Tribal Knowledge	☐ LOA	☐ Substation	☐ Past Expiry Date	☐ Misidentified	☐ No Re-verification	☐ Operator	☐ Offset/Setup	☐ Supplier	☐ Training	☐ Use for Testing	☐ Poor Information	☐ Rushing	☐ Product Improvement	☐ Process Improvement	☐ Manufacturing Process	☐ Past Due	☐ Pressure/Forced	☐ Bending	☐ Centre Not Concentric	☐ Cracks	☐ Crimp/Kink/Ripple/Wave	☐ Cuffs	☐ Crushing	☐ Heat Treat	☐ Wave/Twist in Tube	☐ Marks/Chatter	☐ Temperature/Cure	☐ Set-up	☐ BOM/Route	☐ Broken/Damage/Defect	☐ Inspection Incomplete/Unqualified	☐ Contamination	☐ Countersink	☐ Cut Too Short	☐ Instructions Incomplete/Unclear	☐ Drill Holes	☐ Power Loss/Surge	☐ Folio/Program	☐ Grain	☐ Weld	☐ Wrong Stock Pulled	☐ Out of Sequence	☐ Off-set	☐ Mislabeled	☐ Fit/Function	☐ Misaligned/off center	☐ Positioned Wrong	☐ Outside Dimensions	☐ Over/Under tolerance	☐ Part Incorrect	☐ Part Lost/Missing	☐ Part Moved	☐ Drawing	☐ Finish	☐ Misread	☐ Turning Sequence
																								OTHER : _____																																							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
								Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

Page 3

September 30, 2015 1:32:10 PM

Item ID: D3805-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Plate

Stop *NS2*

Start Date: 9/30/2015 **Start Qty:** 12.00

12

Cust Item ID:**Required Date:** 10/2/2015 **Req'd Qty:** 12.00

12

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/
Work Center ID

Operation Description

Set Up/ Run Hours

Tool ID**Tool #****Plan
Code**

**Accept
Qty**

Reject
Qty

Reject Number

**Insp.
Stamp**

150

Identify as per dwg & Stock Location: W/A001

0.00

150

Packaging

Memo

0.00

Packaging

LOCATION WA001

160

QC21- Final Inspection - Work Order Release

0.00

160

QC

Memo

0.02

Quality Control

20151008

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
				Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
				Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
				Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
				Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
				Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
				Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
				Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
				OTHER : _____			

Picklist Print

September 30, 2015 1:32:15 PM

Page 1

Work Order ID: 137434

137434

Parent Item: D3805-1

D3805-1

Parent Item Name: Plate

Start Date: 9/30/2015

Required Date: 10/2/2015

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev:A 08-07-15 new issue DD verified by:EC
IPP Rev:B 08-07-30 redesign flat pattern DD verified by:EC
IPP Rev:C 08-09-23 redesign flat pattern DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S18GA		Purchased	No			100	sf	189.7776	1.862	23.52			

M304S18GA

304/316 .050 Sheet

DL 15/10/01

Location	Loc Qty	Loc Code
MAT020	113.5276	
M128254	1.6887	
M128435	25	
M128864	31.5964	
M129530	13.8667	
M130923	28.0424	
M131384	8.8334	
M132797	4.5	
MAT20	76.25	
M131700	76.25	

4
10
9.1

23.1

8

7

6

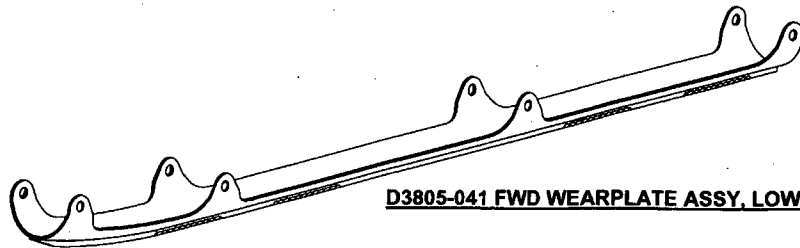
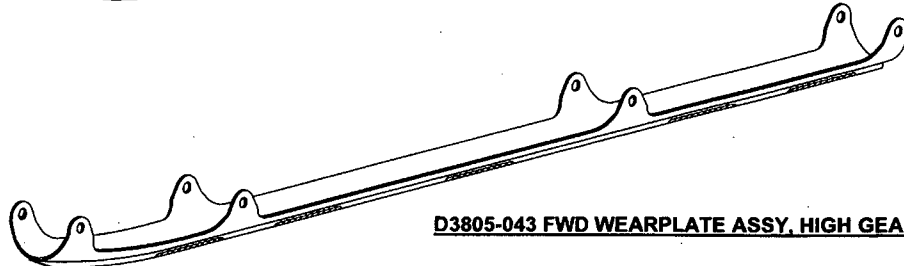
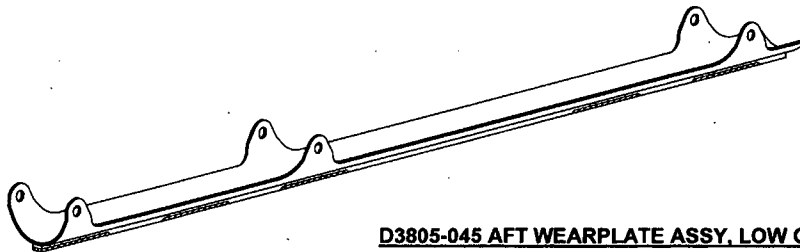
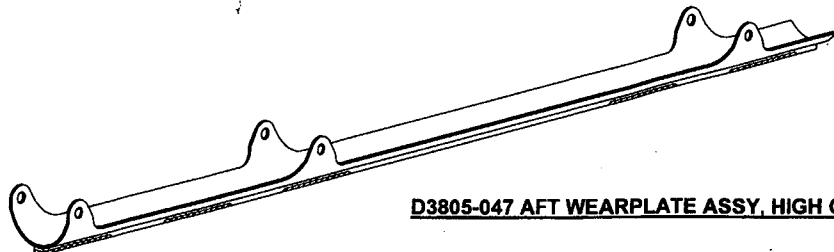
5

4

3

2

1

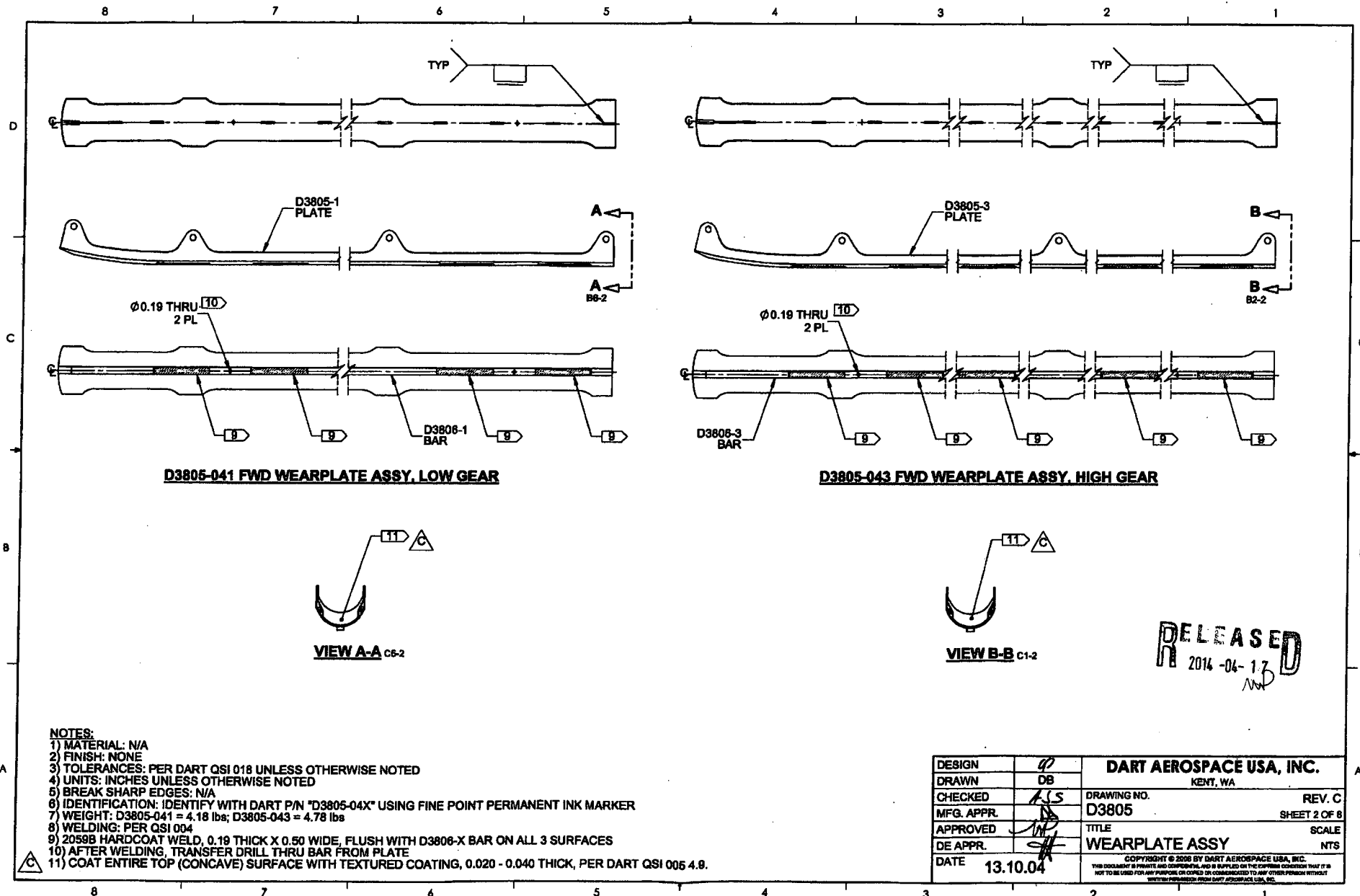
**D3805-041 FWD WEARPLATE ASSY, LOW GEAR****D3805-043 FWD WEARPLATE ASSY, HIGH GEAR****D3805-045 AFT WEARPLATE ASSY, LOW GEAR****D3805-047 AFT WEARPLATE ASSY, HIGH GEAR**

ITEM	QTY -041	QTY -043	QTY -045	QTY -047	P/N	DESCRIPTION
1	X				D3805-041	FWD WEARPLATE ASSY, LOW GEAR
2		X			D3805-043	FWD WEARPLATE ASSY, HIGH GEAR
3			X		D3805-045	AFT WEARPLATE ASSY, LOW GEAR
4				X	D3805-047	AFT WEARPLATE ASSY, HIGH GEAR
11	1				D3805-1	PLATE
12		1			D3805-3	PLATE
13			1		D3805-5	PLATE
14				1	D3805-7	PLATE
15	1				D3806-1	BAR
16		1			D3806-3	BAR
17			1		D3806-5	BAR
18				1	D3806-7	BAR
31	A/R	A/R	A/R	A/R	2059B	HARDCOAT

RELEASED
2014-04-17

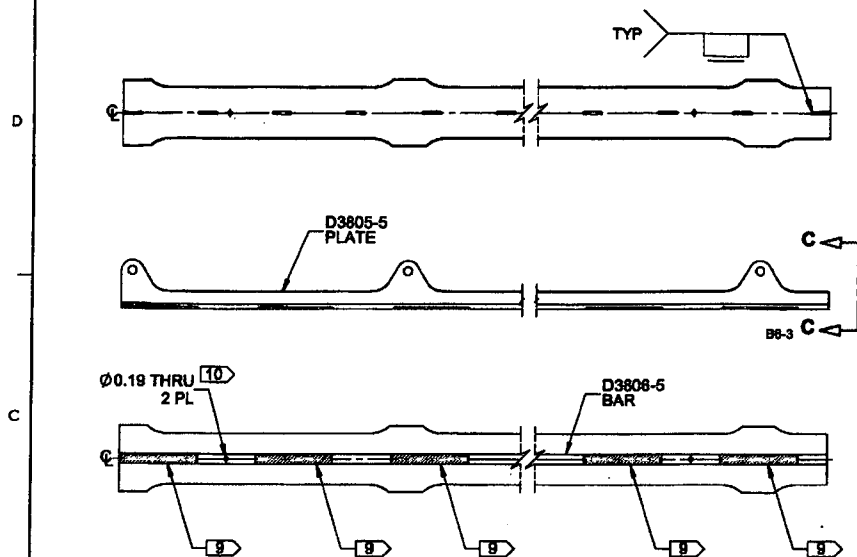
10-3-5-30 SH 137434

REV. C	REMOVE ITEMS 18, 20, 21, 22 AND 32 FROM BOM (ZN C4-1). REVISE NOTE 11, SHEETS 2&3 (ZN A8-2, B2-2, B6-2, A8-3, B2-3, B6-3)	DB	13.10.04
B	REVISED D3805-1F1-3F TO EASE MANUFACTURABILITY (ADDED CUTOUT AT FWD END OF PLATE PER PAR11-106) AND RE-ORGANIZED NOTES SHEETS 2 & 3	MB	11.09.16
A	NEW ISSUE	MB	08.11.21
REV.	DESCRIPTION	BY	DATE
DESIGN	DB	DART AEROSPACE USA, INC.	
DRAWN	DB	KENT, WA	
CHECKED	ASS	DRAWING NO.	REV. C
MFG. APPR.	ASS	D3805	SHEET 1 OF 8
APPROVED	ASS	TITLE	SCALE
DE APPR.	ASS	WEARPLATE ASSY	NTS
DATE	13.10.04	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

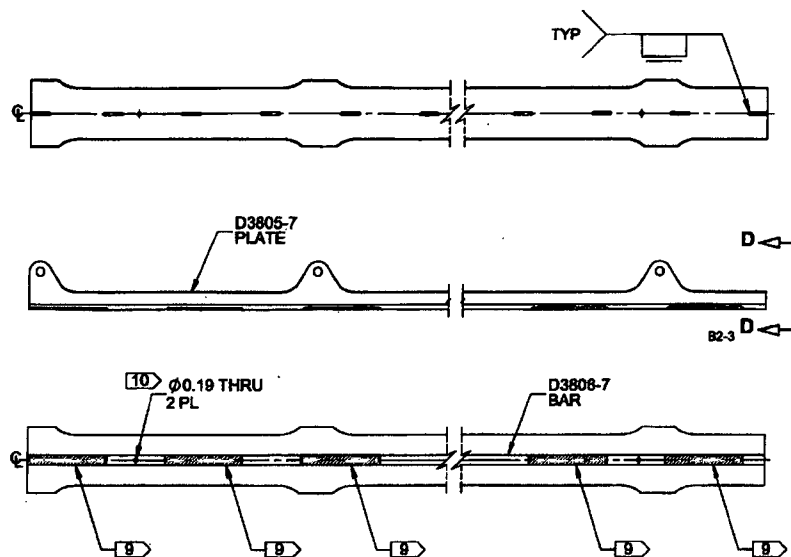


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2014-04-13

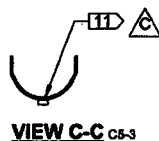
8 7 6 5 4 3 2 1



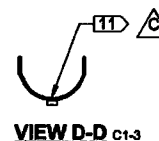
D3805-045 AFT WEARPLATE ASSY.



D3805-047 AFT WEARPLATE ASSY.



VIEW C-C C5-3



VIEW D-D C1-3

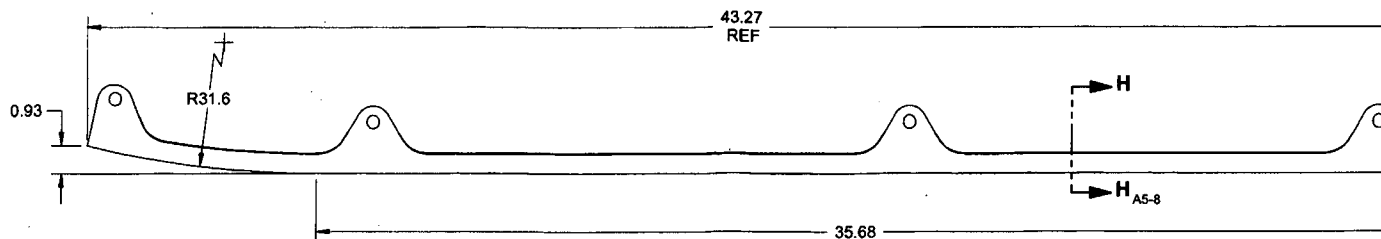
RELEASED
2014-04-17

NOTES:

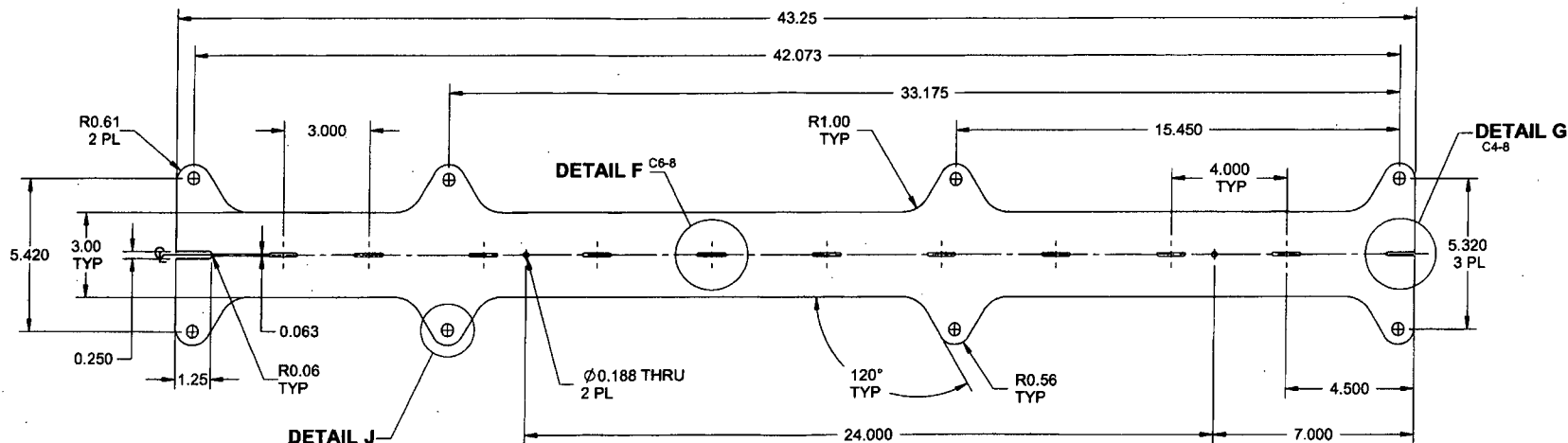
- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3805-04X" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: D3805-045 = 4.24 lbs; D3805-047 = 4.53 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.19 THICK X 0.50 WIDE, FLUSH WITH D3805-X BAR ON ALL 3 SURFACES
- 10) AFTER WELDING, TRANSFER DRILL THRU BAR FROM PLATE
- 11) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING, 0.020 - 0.040 THICK, PER DART QSI 005 4.9.

DESIGN	DB	DART AEROSPACE USA, INC.	
DRAWN	DB	KENT, WA	
CHECKED	ALS	DRAWING NO.	REV. C
MFG. APPR.		D3805	SHEET 3 OF 8
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE ASSY	NTS
DATE	13.10.04	COPYRIGHT © 2006 BY DART AEROSPACE USA, INC.	
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8 7 6 5 4 3 2 1



D3805-1 PLATE
(MAKE FROM D3805-1F)



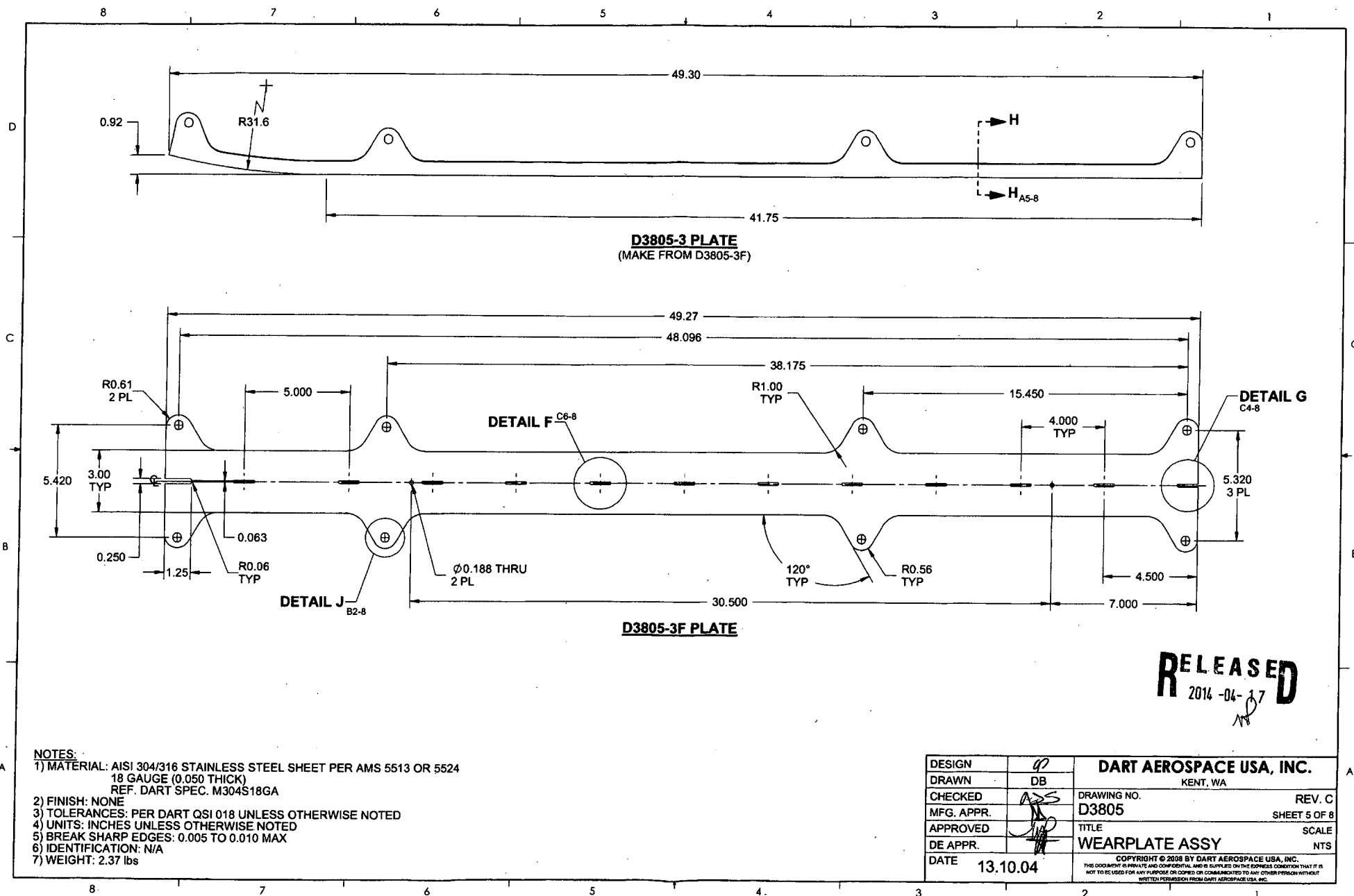
D3805-1F PLATE

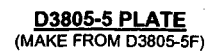
RELEASED
2014-04-17

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET PER AMS 5513 OR 5524
18 GAUGE (0.050 THICK)
REF. DART SPEC. M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 2.11 lbs

DESIGN	DB	DART AEROSPACE USA, INC.	
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CHECKED	ASS	DRAWING NO.	REV. C
MFG. APPR.	ASS	D3805	SHEET 4 OF 8
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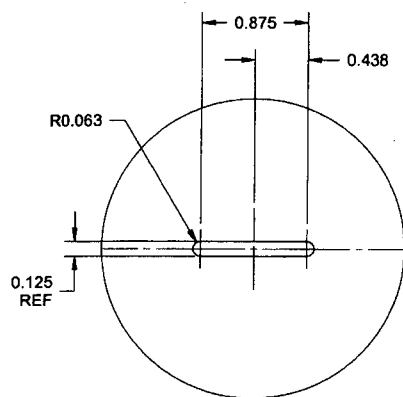
RELEASE
2014-04-17

NOTES:

- NOTES:
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET PER AMS 5513 OR 5524
18 GAUGE (0.050 THICK)
REF. DART SPEC. M304S18GA
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 2.06 lbs

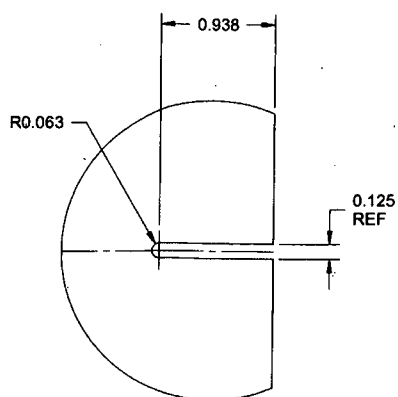
DESIGN	Q	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	DB		
CHECKED	ASS	DRAWING NO.	REV. C
MFG. APPR.	AW	D3805	SHEET 6 OF 8
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CHECKED	<i>AS</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>M</i>	D3805	SHEET 7 OF 8
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WEARPLATE ASSY	NTS
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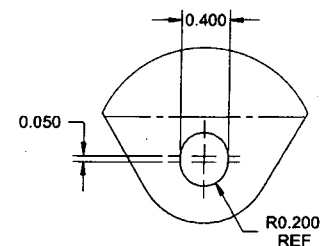
DETAIL F
SLOT DETAIL TYP
SCALE 4X

C5-4
C5-5
C4-6
C4-7



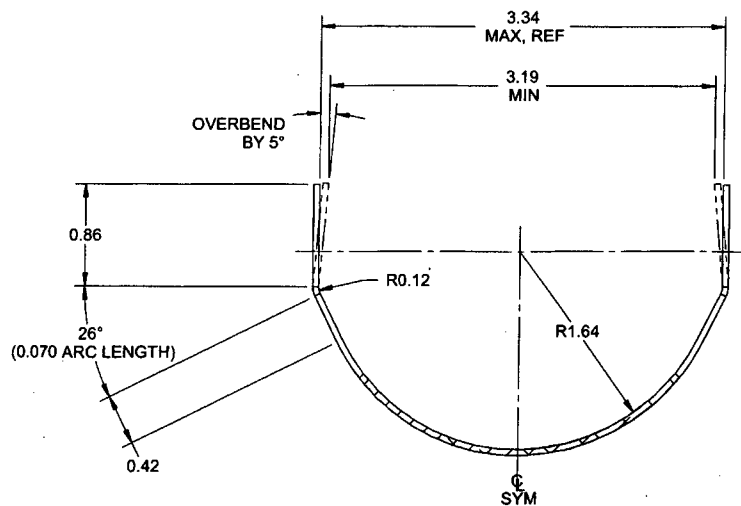
DETAIL G
SLOT DETAIL TYP
SCALE 4X

C1-4
C1-5
C1-6
C2-7



DETAIL J
SCALE 4X

B6-4
B7-5
B5-6
B5-7



SECTION H-H
SCALE 4X

D3-4
D3-5
D3-6
D3-7

RELEASED
2014-04-17

DESIGN	DB	DART AEROSPACE USA, INC.	
DRAWN	DB	KENT, WA	
CHECKED	ASS	DRAWING NO.	REV. C
MFG. APPR.		D3805	SHEET 8 OF 8
APPROVED		TITLE	SCALE
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INSPECTION SHEET

Rev	Date	Change	Revised by	Approved
A	09.05.19	New Issue	KJ	
B	12.02.01	Dwg Rev updated	KJ	
C	15.04.24	Dwg Rev updated	KJ	